Remarks

By way of the present amendment, the specification has been amended to indicate the relationship of the present application to the priority documents. No new matter is introduced by the foregoing amendment, and its entry is respectfully requested.

1. Rejection of Claims 1, 10 and 11 Under 35 U.S.C. § 101

The examiner has rejected claims 1, 10 and 11 under 35 U.S.C. § 101 for allegedly not being supported "by either specific and/or substantial utility or a well established utility". *See* Office Action at page 2-3. Applicants respectfully disagree.

As Applicants have previously stated, it is well-established law that "when a properly claimed invention meets at least one stated objective, utility under section 101 is clearly shown." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 958, 220 U.S.P.Q. 592, 598 (Fed. Cir. 1983). The Examiner acknowledges that Applicants have disclosed several utilities for the nucleic acid molecules of the present invention, for example, to isolate genes, detect other nucleic acid molecules, determine an Expression Response, and genetic mapping. Office Action at page 2. However, the Examiner argues these uses are not useful because they are "applicable to the general class of nucleic acids and are not specific to the SEQ ID NO: elected." *Id.*

The "basic *quid pro quo* contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility...where specific benefit exists in currently available form." *Brenner v. Manson*, 383 U.S. 519, 534-35, 148 U.S.P.Q. 689, 695 (1966). The "threshold for utility is not high: An invention is 'useful' under section 101 if it is capable of providing some identifiable benefit." *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1366, 51 U.S.P.Q.2d 1700, 1702 (Fed. Cir. 1999), *citing Brenner v. Manson*, 383 U.S. 519, 534 (1966). Furthermore, an invention need only provide <u>one</u> identifiable benefit to satisfy 35 U.S.C. § 101. *See Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 958, 220 U.S.P.Q. 592, 598 (Fed. Cir. 1983) ("when a properly claimed invention meets at least one stated objective, utility under section 101 is clearly shown").

The present specification discloses several uses for the claimed nucleic acid molecules, including use as nucleic acid molecule markers and probes for a variety of agronomically significant genes and promoters associated with fiber quality and yield (*see, e.g.,* Specification at page 33, line 20 through page 42, line 11); monitoring the Expression Response of a cell or tissue (page 45, line 8 through page 46, line 2; and 58, line 14 through page 61, line 21); and to identify the presence or absence of a polymorphism (*see, e.g.,* specification at page 46, line 8 through page 53, line 3). In addition, the Examiner acknowledges that the nucleic acid molecules of the present invention may be used as probes, in genetic mapping, and in expression studies, however the Examiner denigrates these utilities by claiming they are not "useful" because they are not specific to the claimed nucleic acid molecules. *See* Office Action at pages 2-4. This is not correct. The claimed nucleic acid molecules are particularly useful, for example, to identify markers and isolate promoters in cotton plants. *See, e.g.,* specification at page 92, line 23 through page 98, line 16 (Example 1).

In short, the Examiner appears to be arguing that the disclosed utilities are not legal utilities simply because other molecules can be used for the same general purposes. As Applicants have previously stated, that position is wrong as a matter of law – there is no requirement of exclusive utility in the patent law. *See Carl Zeiss Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1180, 20 U.S.P.Q.2d 1094, 1100 (Fed. Cir. 1991) ("An invention need not be the best or the only way to accomplish a certain result..."). Such an argument would imply that a new golf club has no legal utility because other golf clubs can be used for the same purpose, *i.e.*, hitting golf balls. That position must be rejected as it requires reading "into the patent laws limitations and conditions which the legislature has not expressed," a practice condemned by the Supreme Court. *See Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 U.S.P.Q. 193, 196 (1980), *quoting United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 199, 17 U.S.P.Q. 154, 162 (1933).

In view of the above, Applicants contend that the claimed nucleic acid molecules are supported by the credible, specific and substantial utilities disclosed in the specification. Because Applicants need only establish a single utility to satisfy 35 U.S.C.

§ 101, and have done so in the present case, the rejection under Section 101 is incorrect. Reconsideration and withdrawal of this rejection are respectfully requested.

2. *Rejection of Claims 1, 10 and 11 Under 35 U.S.C. § 112, First Paragraph, Enablement*

Claims 1, 10 and 11 were rejected under 35 U.S.C. § 112, first paragraph, as not enabled by the specification, because the claimed nucleic acid molecules allegedly lack utility and therefore cannot be enabled. *See* Office Action at page 4. Applicants respectfully traverse this rejection and contend that this rejection has been overcome by the foregoing arguments regarding utility. Thus, the enablement rejection under 35 U.S.C. § 112, first paragraph is improper. Reconsideration and withdrawal are respectfully requested.

3. *Rejection of Claims 1 and 10 Under 35 U.S.C. §112, 1st Paragraph: Written Description*

The Examiner has rejected claims 1 and 10 under 35 U.S.C. § 112, first paragraph, for allegedly not being described in the specification "in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention". *See* Office Action at page 4. Applicants respectfully traverse this rejection.

The Examiner does not dispute that Applicants have possession of and have adequately described the claimed SEQ ID NOs. *See Id.* at page 5; and Office Action mailed April 23, 2002, at page 7. However, the Examiner maintains that the claims allegedly fail to meet the written description requirement because "sequences which comprise SEQ ID NO: 1 encompass a large variety of structures which are not fully and completely described by the instant specification." *See* Office Action at page 5.

As has been stated, the purpose of the written description requirement is to ensure that the inventor had possession of the claimed subject matter, *i.e.*, to ensure that the inventor actually invented what is claimed. *Gentry Gallery Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479, 45 U.S.P.Q.2d 1498, 1503 (Fed. Cir. 1998); *Lockwood v. American*

Airlines, 107 F.3d 1565, 1572, 41 U.S.P.Q.2d 1961, 1966 (Fed. Cir. 1997); *In re Alton*, 76 F.3d 1168, 1172, 37 U.S.P.Q.2d 1578, 1581 (Fed. Cir. 1996). If a person of ordinary skill in the art would, after reading the specification, understand that the inventor had possession of the claimed invention, even if not every nuance, then the written description has been met. *In re Alton*, 76 F.3d at 1175, 37 U.S.P.Q.2d at 1584. A person of ordinary skill in the art, *e.g.*, a molecular biologist, would, after reading the present specification, understand that Applicants had possession of nucleic acid molecules comprising SEQ ID NO: 1, and therefore, the claimed invention.

The respective common structural feature (*i.e.*, the nucleotide sequence of SEQ ID NO: 1) is shared by every nucleic acid molecule in the claimed genus and, thus, distinguishes the members of the claimed genus from non-members. Therefore, if a particular nucleic acid molecule contains the nucleotide sequence of SEQ ID NO: 1, then it is a member of the claimed genus of nucleic acid molecules comprising a nucleic acid sequence of SEQ ID NO: 1. If a particular nucleic acid molecule does not contain the nucleotide sequence of SEQ ID NO: 1, then it is not a member of that claimed genus. The presence of other nucleotides at either end of the recited sequence will not interfere with the recognition of a claimed nucleic acid molecule as such – it either contains the nucleotides of SEQ ID NO: 1 or it does not.

In rejecting Applicants' claims, the Examiner cites page 20 of the instant specification, pointing out that the specification provides support for homologues of the nucleic acid molecules of the present invention which may have as little as 25% identity with a disclosed SEQ ID NO. *See* Office Action at page 5. In relying on this, the Examiner argues that "[a] sequence which is 75% DIFFERENT from SEQ ID NO: 1 is a very different structure from that of SEQ ID NO:1". *Id.* However, the Examiner has provided no support as to why one skilled in the art would not be able to recognize a nucleic acid molecule that contains the nucleotides of SEQ ID NO: 1 in such a structure.

Here, the Examiner appears to assert that each nucleic acid molecule within a claimed genus must be described by its complete structure. *Id.* This assertion is unfounded. The Federal Circuit has elucidated a test for written description wherein a

genus of nucleic acids may be described by a structural feature that distinguishes members of the claimed genus from non-members of the claimed genus. *Regents of the University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1568-69, 43 U.S.P.Q.2d 1398, 1406 (Fed. Cir. 1997). Applicants have satisfied that test for written description.

The Examiner has further rejected claim 1 as allegedly lacking written description because "[t]he instant specification discloses on page 1 that the instantly claimed nucleic acids encode cotton proteins, but is silent with respect to any specific proteins encoded." Office Action at page 6. Furthermore, the Office Action asserts that the specification does not disclose an open reading frame (ORF) "or other evidence that SEQ ID NO: 1 does, in fact, encode a polypeptide of any kind." *Id.* However, as has been pointed out, claim 1 is directed to a nucleic acid molecule encoding a cotton protein or fragment thereof and the specification discloses that the nucleic acid molecules of the present invention were isolated from cotton plants. *See, e.g.,* specification at page 92, line 23 through page 98, line 16 (Example 1). The Examiner has not presented any evidence to contradict these assertions. Furthermore, the fact that a protein or peptide encoded by SEQ ID NO: 1 may be found in other organisms is beside the point. Applicants have provided an adequate written description for the claimed invention. That is all that is required.

In light of the detailed disclosure of the present application, one skilled in the art, after reading the present specification, would clearly know if a nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO: 1. Thus, the claims are supported by an adequate written description pursuant to the requirements of 35 U.S.C. § 112. Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

In view of the above, the presently pending claims are believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections and pass the application to issue. The Examiner is encouraged to

contact the undersigned with respect to any unresolved issues remaining in this application.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned. Applicants do not believe that any fees are due at this time. However, if any fees under 37 C.F.R. §§ 1.16 or 1.17 are required in the present application, including any fees for extensions of time, then the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-2387, referencing docket number 16517.001/51375B.

Respectfully submitted,

Lawrence M. Lavin, Jr.

Lawrence M. Lavin, Jr. (Reg. No. 30,768)
by David R. Marsh (Reg. No. 41,408)

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David R. Marsh

MONSANTO COMPANY
800 N. Lindbergh Blvd.
Mailzone N2NB
St. Louis MO 63167
(314) 694-3602 telephone
(314) 694-1671 facsimile